

## REMARKS

Claims 1-57 are pending in the present application. Claims 1-57 have been examined, claims 8, 9, 27, 28, 46 and 47 are rejected, and claims 1-57 are objected to. In the above amendments, claims 1, 3, 4, 8-10, 16-20, 22, 23, 27-29, 35-39, 41, 42, 46-48 and 54-57 have been amended, and new claims 58-72 have been added. Therefore, after entry of the above amendments, claims 1-72 will be pending in this application. Applicant believes that the present application is now in condition for allowance, which prompt and favorable action is respectfully requested.

### The Drawings

Drawing sheets 1, 3 and 6 have each been revised to delete the spreading sequence  $S_i$  104 going to estimator 120 and to add the spreading sequence  $S_i$  104 going to correlator 116. Support for this change is given in equation (4), which shows the correlator output  $co(t)$  being generated based on the spreading sequence  $S_i$ . Drawing sheets 3 and 6 have each been revised to replace  $h(t)$  at the output of estimator 120 with  $h_i(t)$ . Support for this change is given in paragraph [0054].

### Objected to Claims 1-57

Claims 1-57 are objected to for various informalities noted in the Office Action. Claims 1, 3, 8, 16-20, 22, 35-29, 41, 47 and 54-57 have been amended as suggested in the Office Action. Applicant would like to thank the Examiner for the careful reading of the claims.

For independent claims 1, 20, and 39, the Office Action states that variables  $k$ ,  $d_m$ ,  $\Lambda$ ,  $N$  and  $M$  should be defined in the claims. Claims 1, 20, and 39 have each been amended to define variables  $d_m$  and  $M$ . Variable  $N$  is already defined in these claims, which recite "a spreading sequence  $S_i$  of length  $N$ ".  $N$  is thus the length of the spreading sequence. Variable  $k$  is not used in claims 1, 20, and 39. Variable " $\Lambda$ " is also not used in claims 1, 20, and 39 and may result from printing errors. Symbol " $\Lambda$ " may correspond to "..." in the claims given above.

Accordingly, the objection to claims 1-57 should be withdrawn.

**Rejection of Claims 8, 27 and 46 Under 35 U.S.C. §112, First Paragraph**

Claims 8, 27 and 46 stand rejected under 35 U.S.C. §112, first paragraph, because the specification does not reasonably provide enablement for  $M = 0$  as recited in the claims.

Claims 8, 27 and 46 have each been amended to recite " $M = 1$ ", which is supported by the specification and correspond to the case in which only one symbol  $d_0$  is used to derive the estimated communication channel impulse response. Again, Applicant would like to thank the Examiner for the careful reading of these claims.

**Rejection of Claims 9, 28 and 47**

Claims 9, 28 and 47 stand rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 12, 30 and 48 of co-pending Application Serial No. 10/650,271.

A terminal disclaimer is submitted herewith to overcome the non-statutory obviousness-type double patenting rejection of claims 9, 28 and 47.

Accordingly, the rejection of claims 9, 28 and 47 should be withdrawn.

**Allowable Claims 1-7, 10-26, 29-45 and 48-57**

Claims 1-7, 10-26, 29-45 and 48-57 are indicated as being allowable if rewritten or amended to overcome the claim objections set forth in the Office Action.

Claims 1-57 have been amended to overcome the informalities noted in the Office Action, as discussed above.

Applicant submits that claims 1-7, 10-26, 29-45 and 48-57 are now allowable.

**New Claims**

New claims 58-72 recite features similar to those recited in claims 1-54, without using mathematical notations. These claims should be allowable for reasons similar to those given for allowable claims 1-7, 10-26, 29-45 and 48-57.

### CONCLUSION

In light of the amendments contained herein, Applicant submits that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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